ABSTRACT

Provided are fluorescent substrates for β -lactamases having the general formula I:

$$CO_2R'$$

in which R is a benzyl, 2-thienylmethyl, or cyanomethyl group; R' is selected from the group consisting of H, physiologically acceptable salts or metal, ester groups, ammonium cations, -- $CHR_2OCO(CH_2)_nCH_3$, -- $CHR_2OCO(CH_3)_3$, acylthiomethyl, acyloxy-alpha-benzyl, deltabutyrolactonyl, methoxycarbonyloxymethyl, phenyl, methylsulphinylmethyl, β -morpholinoethyl, dialkylaminoethyl, and dialkylaminocarbonyloxymethyl, in which R_2 is selected from the group consisting of H and lower alkyl; A is selected from the group consisting of S, O, SO, SO₂ and CH_2 ; and Z is a donor fluorescent moiety. Also provided are methods of use of the compound of general formula I.